UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,105	09/26/2003	Andrew D. Flockhart	4366-113	2566

48500 7590 08/22/2008

SHERIDAN ROSS P.C.
1560 BROADWAY, SUITE 1200
DENVER, CO 80202

EXAMINER	
CHONG CRUZ, NADJA N	
ART UNIT	**PAPER NUMBER**
3623	

MAIL DATE	DELIVERY MODE
08/22/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/673,105	FLOCKHART ET AL.	
	Examiner	Art Unit	
	NADJA CHONG CRUZ	3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-54* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-54* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *See Continuation Sheet*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :26 Sept 2003, 12 Jan 2004, 29 Jan 2004, 25 Jan 2005, 14 Dec 2006, 14 Jun 2007, 22 Mar 2008 & 8 Jul 2008.

DETAILED ACTION

Status of Claims

1. This is a Non-Final office action in reply to the application filed on 26 September 2003.

2. Claims 1-54 are currently pending and have been examined.

Claim Objections

3. Claim 43 is objected to because of the following informalities: it appears to be at the end of the claim the word "and" without a word or statement to finish the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 23 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. As per claim 23, the limitation *wherein the at least one of a resource value and work item value comprises both the resource value and the work item value* is vague and indefinite, the limitations do not define the metes and bounds of the invention, because Examiner is not clear how can a resource value or work item value contains both the resource value and the work item value?. For the purposes of this examination, the examiner will interpret resource value contains a resource value and, work item value contains a work item value, respectively. Appropriate correction is required.

Claim Rejections - 35 USC § 101

7. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. Claims 1-18 are rejected under 35 U.S.C. 101 based on Supreme Court precedent, and recent Federal Circuit decisions, the Office's guidance to examiners is that a § 101 process must (1) be tied to another statutory class (such as a particular apparatus) or (2) transform underlying subject matter (such as an article or materials) to a different state or thing. *Diamond* v. *Diehr,* 450 U.S. 175, 184 (1981); *Parker* v. *Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk* v. *Benson*, 409 U.S. 63, 70 (1972); *Cochrane* v. *Deener*, 94 U.S. 780,787-88 (1876).

9. An example of a method claim that would not qualify as a statutory process would be a claim that recited purely mental steps. Thus, to qualify as a § 101 statutory process, the claim should positively recite the other statutory class (the thing or product) to which it is tied, for example by identifying the apparatus that accomplishes the method steps, or positively recite the subject matter that is being transformed, for example by identifying the material that is being changed to a different state.

10. Here, applicant's method steps, fail the first prong of the new Federal Circuit decision since they are not tied to another statutory class and can be performed without the use of a particular apparatus. Thus, claims 1-18 are non-statutory since they may be preformed within the human mind.

11. Nominal recitations of structure in an otherwise ineligible method fail to make the method a statutory process. See Benson, 409 U.S. at 71-72. As Comiskey recognized, "the mere use of the machine to collect data necessary for application of the mental process may not make the claim patentable subject matter." Comiskey, 499 F.3d at 1380 (citing In re Grams, 888 F.2d 835, 839-40 (Fed. Cir. 1989)). Incidental physical limitations, such as data gathering, field of use limitations, and post-solution activity are not enough to convert an abstract idea into a statutory process. In other words, nominal or token recitations of structure in a method claim do not convert an otherwise ineligible claim into an eligible one. Claims 2-18 inherit the same deficiencies as claim 1 and are therefore rejected for the same reasons as claim 1.

12. Claim 20 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. It is noted that it is not clear which statutory class applicant intends to claim, for the purposes of examination, examiner interprets claim 20, *a logic circuit* as software. Therefore, claim 20 is directed toward a logic circuit, software per se. However, under the current guidelines of 35 USC 101, computer software must be tangibly embodied on a computer readable medium, and, when executed by a computer processor, perform the steps of the software. In their broadest reasonable interpretation and in light of the specification, claim 20, as recited, can be interpreted to be embodied on abstract mediums such as carrier waves and signals, and therefore not eligible for patent protection. Accordingly, claim 20 is not eligible for patent protection.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said

subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

14. Claims 1-6, 8-14, 16-20, 24-32, 34-40 and 42-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Philonenko (US 2002/0131399 A1) in view of Spraetz, **Out with the new, in with the old: A look at scheduling alternatives**, *Customer Inter@ction Solutions*; Nov. 2001: 20,5.

Claim 1:

Philonenko as shown discloses a method and system for allocating work items in a contact center, the method and system comprising:

- *(a) providing a set of resources operable to service a work item* (Figures 2 and 3, which they illustrates a set of resources (e.g., Agents 1 to 4) operable to service a work item (e.g., a call service));
- *(c)receiving at least one bid to service the work item* (page 13, ¶ 0157: which teaches that "the 'offer of value' or a bid might be from a communication-center host or entity to a client" where "[t]he offer of value may be given to a client for agreeing to wait longer in a queue instead of being advanced in the queue" in order "to help load balance busy agents without losing clients due to long waiting periods." Philonenko teaches that a bid have been received in order to service the work item);

Philonenko does not expressly teach how bids are submitted and how the resource is selected. However, Spraetz in an analogous art of allocating work items for the purpose of schedule bidding (page 48, column 1, 2nd ¶) as shown does:

- *(b) requesting at least some of the resources in the set of resources to submit a bid to service the work item* (page 48, column 1, 2nd ¶: which teaches that "agents bid" (e.g., submit a bid) "for work assignments" (e.g., to service the work item));

- *(d) and based at least in part on the at least one bid, selecting a resource from among the set of resources to service the work item* (page 50, 1st column, 4th ¶: which teaches that "[o]nce bidding is closed, agent's selection can be evaluated against bidding rules and schedules automatically assigned". Spraetz teaches that a resource is selected based on bidding rules);

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to submit bid and select a resource based on that bit as taught by Spraetz, to improve Philonenko, thereby giving the predictable result of optimizing "resource use and meet service goals." In addition, it provides "closer matching of schedules to forecasted volumes reduces the amount of time supervisors must spend manually manipulating and adjusting schedules." (Spraetz, page 50, 1st column, 3rd ¶).

Claim 2:

Philonenko does not teach the following limitation. However, Spraetz in an analogous art of allocating work items for the purpose of schedule bidding (page 48, column 1, 2nd ¶) as shown does:

- *wherein the set of resources comprises a plurality of resources external to the contact center* (page 50, 2nd column, 3rd ¶: which teaches "contract labor" (e.g., a plurality of resources external to the contact center));

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include a plurality of resources external to the contact center as taught by Spraetz, to improve Philonenko, thereby giving the predictable result of using "preference scheduling to fill in the gaps with newly hired agents, part-time agents or contract labor" in order to reduce "the effects of agent turnover and changes in contact volumes between bid cycles" (Spraetz, page 50, 2nd column, 3rd ¶).

Claim 3:

Philonenko as shown discloses the following limitation:

- *identifying a subset of resources from among the set of resources qualified to service the work item* (page 3, ¶ 0037: which teaches that “to route" (e.g., identifying) "calls to agents at the call center based on the assigned priority, together with information about agent skills and status" (e.g., resources qualified to service the work item));

Philonenko does not expressly teach how bids are submitted and how the resource is selected. However, Spraetz in an analogous art of allocating work items for the purpose of schedule bidding (page 48, column 1, 2nd ¶) as shown does:

- *and wherein, in the requesting step, a bid request is provided to each of the resources in the subset of resources* (page 48, column 1, 2nd ¶: which teaches that “agents bid” (e.g., a bid request for each of the resources) “for work assignments" (e.g., subset of resources));

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide bid request to each of the resources as taught by Spraetz, to improve Philonenko, thereby giving the predictable result of optimizing “resource use and meet service goals.” (Spraetz, page 50, 1st column, 3rd ¶).

Claim 4:

Philonenko as shown discloses the following limitation:

- *wherein the requesting, receiving and selecting steps are performed only during a bidding operational mode* (Figure 9, which it illustrates a user interaction that allows the user to prioritize position in the queue by offering a bid or offer of value. Philonenko teaches that in order to execute those steps, it is in bidding operational mode);

Claim 5:

Philonenko as shown discloses the following limitation:

- *monitoring at least one queue of work items* (page 3, ¶ 0039: which teaches that "[t]he CTI application monitors switch 21 for incoming calls to a routing or call-distribution point" as shown in Figure 3 "Call Waiting Queue");
- *the at least one queue of work items corresponding to a first set of resources for servicing work items in the at least one queue* (Figure 3, which teaches a first set of resources available for servicing work items in the queue (e.g., Agent 3 or Agent 2));
- *when a predetermined workload level exists in the at least one queue* (page 10, ¶ 0129: which teaches that "the priority queue limit in switch 135 at center 117 is 10 calls" (e.g., a predetermined workload level));
- *performing steps (b) through (d); and when a predetermined workload level does not exist in the at least one queue, not performing steps (b) through (d)* (See Claim 1 and page 11, ¶ 0143: which teaches that "a caller may gain initiative IVR interaction for the purpose of bidding for advancement or further advancement in queue". It is implicitly disclosed that a predetermined workload does not exist, a bidding process is not necessary);

Claim 6:

Philonenko as shown discloses the following limitation:

- *wherein the predetermined workload level exists when there is a likelihood that a service goal for at least one work item in the at least one queue will not be satisfied* (page 10, ¶ 0129: which teaches that "the priority queue limit in switch 135 at center 117 is 10 calls" (e.g., a predetermined workload level) "before the agent at station 153 is deemed unavailable" (e.g., a queue will not be satisfied, therefore it will fail his/her service goal));

As per **claim 32**, this claim encompasses substantially the same scope as claim 6 (e.g., "allocating work items, such as contacts", Specification, page 2, line 19). Accordingly, claim 32 is rejected in substantially the same manner as claim 6, as described above.

As per **claim 53**, this claim encompasses substantially the same scope as claim 6 (e.g., "allocating work items, such as contacts", Specification, page 2, line 19). Accordingly, claim 53 is rejected in substantially the same manner as claim 6, as described above.

Claim 8:

Philonenko as shown discloses the following limitation:

- *determining, from the at least one queue, a representation of a required queue for at least one goal to be realized for each work item in the at least one queue* (Figure 3, which it illustrates a representation of a required queue for at least one goal (e.g., priority assignments) to be realized for each work item (e.g., call services));

As per **claim 34**, this claim encompasses substantially the same scope as claim 8 (e.g., "allocating work items, such as contacts", Specification, page 2, line 19). Accordingly, claim 34 is rejected in substantially the same manner as claim 8, as described above.

Claim 9:

Philonenko as shown discloses the following limitation:

- *wherein the predetermined workload level exists when a queue position in the required queue is less than a number of work items ahead of the queue position in the required queue* (page 4, ¶ 0051: which teaches that "a broad variety of rules and conditions" (e.g., the required queue is less than a number of work items) "with regards to agents such as incorporating various sub-states such as E-mail duties, setting interrupt rules for particular agents, and so on." Philonenko teaches that based on predetermined rules and conditions, "an agent residing at agent station 33 may be reported busy because he is answering E-mails and cannot be interrupted by a telephone call unless it is of priority 7 or above. In this case, if there

are no other agents available to take the priority 7 call, it will be routed to the agent at agent station 33. He will accept the call and suspend his E-mail duty until he has disposed of the call, and so on.")

Claim 10:

Philonenko as shown discloses the following limitation:

- *determining a time when the predetermined workload level will likely exist* (page 10, ¶ 0129: which teaches that "the priority queue limit in switch 135 at center 117 is 10 calls" (e.g., a predetermined workload level will likely exist during that period of time: 10 calls));

As per **claim 36**, this claim encompasses substantially the same scope as claim 10. Accordingly, claim 36 is rejected in substantially the same manner as claim 10, as described above.

Claim 11:

Philonenko does not teach the following limitation. However, Spraetz in an analogous art of allocating work items for the purpose of schedule bidding (page 48, column 1, 2nd ¶) as shown does:

- *determining a number and identities of work items to be presented for bidding to the set of resources* (page 50, 2nd column, 3rd ¶: which Spraetz teaches that in order to use schedule bidding "the effects of agent turnover and changes in contact volumes" (e.g., number and identities of work items) are determined to be presented for bidding to the resources);

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to submit bid and select a resource based on that bit as taught by Spraetz, to improve Philonenko, thereby giving the predictable result of optimizing "resource use and meet service goals." (Spraetz, page 50, 1st column, 3rd ¶).

As per **claim 37**, this claim encompasses substantially the same scope as claim 11 (e.g., "allocating work items, such as contacts", Specification, page 2, line 19). Accordingly, claim 37 is rejected in substantially the same manner as claim 11, as described above.

Claim 12:

Philonenko as shown discloses the following limitation:

- *comparing the received bids with a maximum acceptable bid* (page 13, ¶ 0156: which teaches that "A client paying, say a $10.00 commission to a stock broker for a single transaction would be advanced ahead of the client only willing to pay a $5.00 commission and so on" Philonenko teaches that bids received are compared (e.g., $10.00 vs. $5.00) with a maximum acceptable bid (e.g., $10.00 in commission) in order to reduce the amount of public queue waiting time);

As per **claim 38**, this claim encompasses substantially the same scope as claim 12. Accordingly, claim 38 is rejected in substantially the same manner as claim 12, as described above.

Claim 13:

Philonenko as shown discloses the following limitation:

- *determining, for each bidding resource, a composite value reflecting a plurality of a work item value, a resource value and a bid and comparing the determined composite values to select a resource to service the work item* (page 2, ¶ 0025: which teaches that "(a) interacting with the author of each event" (e.g., a plurality of work item value) "to establish a value contribution promise or not;" (e.g., a bid) "(b) upon receiving a promise of a value contribution, transacting the value contribution on behalf of the author; and (c) advancing the queue position" (e.g., a resource value) "of the message of the author according to the rules of transaction" (e.g., comparing the determined composite values to select a resource to service the work item));

As per **claim 39**, this claim encompasses substantially the same scope as claim 13 (e.g., "allocating work items, such as contacts", Specification, page 2, line 19). Accordingly, claim 39 is rejected in substantially the same manner as claim 13, as described above.

Claim 14:

Philonenko does not teach the following limitation. However, Spraetz in an analogous art of allocating work items for the purpose of schedule bidding (page 48, column 1, 2nd ¶) as shown does:

- *determining whether or not a workload level for the contact center requires the work item that is the subject of the received bids to be serviced by a resource in the set of resources* (page 50, 2nd column, 3rd ¶ which teaches that "[f]or operations using schedule bidding, the effects of agent turnover and changes in contact volumes" (e.g., work items that is the subject of the received bids) "between bid cycles could be addressed quite effectively by using preference scheduling to fill in the gaps with newly hired agents, part-time agents or contract labor." Spraetz teaches that a workload level is determined in order to fill in the gaps for a work assignment by bidding it);

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to determine a workload level that requires the work items to receive bids as taught by Spraetz, to improve Philonenko, thereby giving the predictable result of optimizing "resource use and meet service goals." (Spraetz, page 50, 1st column, 3rd ¶).

As per **claim 40**, this claim encompasses substantially the same scope as claim 14 (e.g., "allocating work items, such as contacts", Specification, page 2, line 19). Accordingly, claim 40 is rejected in substantially the same manner as claim 14, as described above.

Claim 16:

Philonenko as shown discloses the following limitation

- *wherein at least some of the resources are human agents* (pages 4-5 ¶ 0054: which teaches that "[a]gent group 71 comprises agents 1-4" where agent 1 is in training. Philonenko teaches that the agent group are human agents);

As per **claim 42**, this claim encompasses substantially the same scope as claim 16. Accordingly, claim 42 is rejected in substantially the same manner as claim 16, as described above.

Claim 17:

Philonenko as shown discloses the following limitation

- *wherein the bid is at least one of a monetary service fee, a service time, an opportunity cost to the contact center for servicing the work item, and an overhead cost to the contact center for servicing the work item* (page 13, ¶ 0156: which teaches that "clients may actually promise cash increments of the like" (e.g., a monetary service fee) "to shave certain amounts of time of a public queue waiting time".);

As per **claim 43**, this claim encompasses substantially the same scope as claim 17. Accordingly, claim 43 is rejected in substantially the same manner as claim 17, as described above.

Claim 18:

Philonenko does not teach the following limitation. However, Spraetz in an analogous art of allocating work items for the purpose of schedule bidding (page 48, column 1, 2nd ¶) as shown does:

- *wherein a plurality of work items are put out for bid and further comprising: dynamically varying a bidding time for each of the plurality of work items* (page 50, 2nd column, 3rd ¶ which teaches that "the effects of agent turnover and changes in contact volumes" (e.g., a plurality of work items) are put out for bid (e.g., schedule bidding) during a "bid cycle" (e.g., dynamically varying a bidding time) "to fill in the gaps");

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to bit a plurality of work items by dynamically varying a bidding time (e.g., bid cycle) as

taught by Spraetz, to improve Philonenko, thereby giving the predictable result of optimizing "resource use and meet service goals." (Spraetz, page 50, 1st column, 3rd ¶).

As per **claim 44**, this claim encompasses substantially the same scope as claim 18 (e.g., "allocating work items, such as contacts", Specification, page 2, line 19). Accordingly, claim 44 is rejected in substantially the same manner as claim 18, as described above.

Claim 19:

Philonenko as shown discloses the following limitation:

- *A computer readable medium containing instructions for performing the steps of Claim 1* (page 3, ¶ 0034: which teaches that "statistical and skill based routines may be stored" (e.g., a computer readable medium) "and executed via processor");

Claim 20:

Philonenko as shown discloses the following limitation:

- *A logic circuit operable to perform the steps of Claim 1* (page 3, ¶ 0042: which teaches a "[s]oftware" (e.g., a logic circuit) "to accomplish the novel priority-based distribution of calls");

Claim 24:

Philonenko as shown discloses a contact center for servicing a plurality of customer with a plurality of contacts, the contact center comprising:

- *a plurality of workstations corresponding to a plurality of resources* (page 6, ¶ 0075 and Figure 5, which it illustrates "a plurality of agent-manned telephones 148, 150, 152, and 154." (e.g., telephones of a plurality or resources) "Telephones 148-154 are implemented one each at separate agent workstations 147, 149, 151 and 153 respectively" (e.g., a plurality of workstations));

- *a (central) server in communication with the plurality of workstations, comprising* (Figure 5, "T-Server" which is in communication with the plurality of workstations);

- *at least one queue of contacts* (Figure 4, which it illustrates "Calls Waiting Queue"));

- *(b) receive at least one bid to service the at least one contact* (page 13, ¶ 0157: which teaches that "the 'offer of value' or a bid might be from a communication-center host or entity to a client" where "[t]he offer of value may be given to a client for agreeing to wait longer in a queue instead of being advanced in the queue" in order "to help load balance busy agents without losing clients due to long waiting periods." Philonenko teaches that a bid have been received in order to service one contact);

Philonenko does not expressly teach how bids are submitted and how the resource is selected. However, Spraetz in an analogous art of allocating work items for the purpose of schedule bidding (page 48, column 1, 2nd ¶) as shown does:

- *and a bid item selecting agent operable to (a) request at least some of the plurality of resources to submit a bid to service at least one contact* (page 48, column 1, 2nd ¶: which teaches a schedule bidding (e.g., a bid item selecting agent operable) where "agents bid" (e.g., submit a bid) "for work assignments" (e.g., to service a contact));
- *and (c) select a resource from among the plurality of resources to service the at least one contact.* (page 50, 1st column, 4th ¶: which teaches that "[o]nce bidding is closed, agent's selection can be evaluated against bidding rules and schedules automatically assigned". Spraetz teaches that a resource is selected based on bidding rules);

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to submit bid and select a resource based on that bit as taught by Spraetz, to improve Philonenko, thereby giving the predictable result of optimizing "resource use and meet service goals." In addition, it provides "closer matching of schedules to forecasted volumes reduces the amount of time supervisors must spend manually manipulating and adjusting schedules." (Spraetz, page 50, 1st column, 3rd ¶).

As per **claim 45**, this claim encompasses substantially the same scope as claim 24. Accordingly, claim 45 is rejected in substantially the same manner as claim 24, as described above.

Claim 25 and 46:

Philonenko as shown discloses the following limitation:

- *a first set of workstations corresponding to a first set of resources, wherein the workstations in the first set are internal to the contact center and wherein the workstations in the first workstation set are different from the workstations in the second workstation set* (page 6, ¶ 0075 and Figure 5, which it illustrates "a plurality of agent-manned telephones 148, 150, 152, and 154." "Telephones 148-154 are implemented one each at separate agent workstations 147, 149, 151 and 153 respectively" (e.g., a plurality of workstations). Philonenko teaches a plurality of workstations internal to the contact center);

Philonenko does not expressly teach that it has workstations external to the contact center (e.g., workstations from a contractor). However, Spraetz in an analogous art of allocating work items for the purpose of schedule bidding (page 48, column 1, 2nd ¶) as shown does:

- *wherein the plurality of workstations are external to the contact center and define a second set of workstations and (wherein) the plurality of resources define a second set of resources and further comprising* (page 50, 2nd column, 3rd ¶: which teaches "contract labor" (e.g., a plurality of resources external to the contact center, second set of resources) where is well known in the art that each contact center includes a plurality of workstations);

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include a plurality of resources external to the contact center as taught by Spraetz, to improve Philonenko, thereby giving the predictable result of using "preference scheduling to fill in the gaps with newly hired agents, part-time agents or contract labor" in order to reduce "the effects of agent turnover and changes in contact volumes between bid cycles" (Spraetz, page 50, 2nd column, 3rd ¶).

Claims 26 and 47:

Philonenko as shown discloses the following limitation:

- *further comprising at least one second queue for holding contacts to be serviced by the first workstation set, wherein the contacts in the at least one queue of contacts are selected from the at least one second queue* (page 11, ¶ 0141 and Figure 8, which it illustrates a second queue (e.g., P1) for holding contacts (e.g., "802 Holding Point) to be serviced by the first workstation set (e.g., Figure 5) and Figure 4 which it illustrates that queue of contacts are selected from the at least one second queue (e.g., Agent 2: back to queue));

Claim 27:

Philonenko as shown discloses the following limitation:

- *wherein the central server comprises a workload monitoring agent operable to monitor the at least one queue of contacts* (page 3, ¶ 0039: which teaches that is old and well known in the art (e.g., Figure 1) that "[t]he CTI application monitors switch 21 for incoming calls to a routing or call-distribution point" where "[t]he status of telephone agent stations" (e.g., queue of contacts) " is also monitored");

Philonenko does not expressly teach bidding process duration. However, Spraetz in an analogous art of allocating work items for the purpose of schedule bidding (page 48, column 1, 2nd ¶) as shown does:

- *and determine, for each contact, at least one of a bid start time, a bidding process duration, and a bid completion time* (page 50, 2nd column, 3rd ¶ which teaches that using scheduling bidding for each contact "the effects of agent turnover and changes in contact volumes between bid cycles" (e.g., a bidding process duration, which includes bid start time and completion time) "could be addressed quite effectively);

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to submit bid and select a resource based on that bit as taught by Spraetz, to improve

Philonenko, thereby giving the predictable result of optimizing "resource use and meet service goals." In addition, it provides "closer matching of schedules to forecasted volumes reduces the amount of time supervisors must spend manually manipulating and adjusting schedules." (Spraetz, page 50, 1st column, 3rd ¶).

As per **claim 48**, this claim encompasses substantially the same scope as claim 27. Accordingly, claim 48 is rejected in substantially the same manner as claim 27, as described above.

Claims 28 and 49:

Philonenko as shown discloses the following limitation:

- *wherein the contacts in the at least one queue comprise one or more of realtime and non-real time contacts* (Figure 3, which it illustrates "Agent Status (Real-Time request and priority assignment)");

Claim 29:

Philonenko as shown discloses the following limitation:

- *wherein the selecting agent is further operable to identify a set of resources from among the plurality of resources qualified to service the contact* (page 3, ¶ 0037: which teaches that "to route" (e.g., identifying) "calls to agents at the call center based on the assigned priority, together with information about agent skills and status" (e.g., resources qualified to service the contact));

Philonenko does not expressly teach how bids are submitted and how the resource is selected. However, Spraetz in an analogous art of allocating work items for the purpose of schedule bidding (page 48, column 1, 2nd ¶) as shown does:

- *and provide a bid request to each of the resources in the set of resources* (page 48, column 1, 2nd ¶: which teaches that "agents bid" (e.g., a bid request for each of the resources) "for work assignments" (e.g., subset of resources));

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide bid request to each of the resources as taught by Spraetz, to improve Philonenko,

thereby giving the predictable result of optimizing "resource use and meet service goals." (Spraetz, page 50, 1st column, 3rd ¶).

As per **claim 50**, this claim encompasses substantially the same scope as claim 29. Accordingly, claim 50 is rejected in substantially the same manner as claim 29, as described above.

Claim 30:

Philonenko as shown discloses the following limitation:

- *wherein the selecting agent requests, receives and selects bids when a bidding operational mode is in effect but not when a bidding operational mode is not in effect* (Figure 9, which it illustrates a user interaction that allows the user to prioritize position in the queue by offering a bid or offer of value. Philonenko teaches that in order to execute those steps, it is in bidding operational mode);

As per **claim 51**, this claim encompasses substantially the same scope as claim 30. Accordingly, claim 51 is rejected in substantially the same manner as claim 30, as described above.

Claim 31:

Philonenko as shown discloses the following limitation:

- *wherein the selecting agent is operable, when a predetermined workload level exists in the at least one queue* (page 10, ¶ 0129: which teaches that "the priority queue limit in switch 135 at center 117 is 10 calls" (e.g., a predetermined workload level));
- *perform functions (a) through (c) and, when a predetermined workload level does not exist in the at least one queue, not performing functions (a) through (c)* (See Claim 24 and page 11, ¶ 0143: which teaches that "a caller may gain initiative IVR interaction for the purpose of bidding for advancement or further advancement in queue". It is implicitly disclosed that a predetermined workload does not exist, a bidding process is not necessary);

As per **claim 52**, this claim encompasses substantially the same scope as claim 31. Accordingly, claim 52 is rejected in substantially the same manner as claim 31, as described above.

Claim 35:

Philonenko as shown discloses the following limitation:

- *wherein the predetermined workload level exists when a queue position in the required queue is less than a number of enqueued contacts ahead of the queue position in the required queue* (page 4, ¶ 0051: which teaches that "a broad variety of rules and conditions" (e.g., the required queue is less than a number of enqueued contacts) "with regards to agents such as incorporating various sub-states such as E-mail duties, setting interrupt rules for particular agents, and so on." Philonenko teaches that based on predetermined rules and conditions, "an agent residing at agent station 33 may be reported busy because he is answering E-mails and cannot be interrupted by a telephone call unless it is of priority 7 or above. In this case, if there are no other agents available to take the priority 7 call, it will be routed to the agent at agent station 33. He will accept the call and suspend his E-mail duty until he has disposed of the call, and so on.")

15. Claims 7, 15, 33, 41 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Philonenko (US 2002/0131399 A1) in view of Spraetz, **Out with the new, in with the old: A look at scheduling alternatives**, *Customer Inter@ction Solutions*; Nov. 2001: 20,5 as applied to claims 1-6, 8-14, 16-20, 24-32, 34-40 and 42-53 above further in view of EIX (1998-2002) (http://web.archive.org/web/20020803000353/http://www.iex.com), hereinafter "EIX" aspects of are discussed in the following references:

a. TotalView™ The Workforce Management Solution, TotalView Product Literature: The Perfect Fit (1998-2002) hereinafter Reference A.

b. TotalView™ The Workforce Management Solution, TotalView Product Literature: TotalView's Agent Webstation (1998-2002) hereinafter Reference B.

Claim 7:

The combination of Philonenko and Spraetz does not expressly teach the following limitation. However, EIX in an analogous art of allocating work items for the purpose of determining a time interval (Reference A, page 2, Schedule Assignment) as shown does:

- *determining a time interval for performance of steps (b) through (d)* (Reference A, page 2, Intraday Management – A detailed look at performance: which teaches "[m]ultiple viewing options show you both Performance Analysis and Schedule Management for realtime control of call center efficiency");

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to determine a time interval for performance as taught by Spraetz, to improve Philonenko, thereby giving the predictable result of "constantly monitors workload and staff" where "workload can be transferred to sites with available staff". (Reference A, page 2, Intraday Management – A detailed look at performance).

As per **claim 33**, this claim encompasses substantially the same scope as claim 7. Accordingly, claim 33 is rejected in substantially the same manner as claim 7, as described above.

As per **claim 54**, this claim encompasses substantially the same scope as claim 7. Accordingly, claim 54 is rejected in substantially the same manner as claim 7, as described above.

Claim 15:

The combination of Philonenko and Spraetz teaches a bidding process for work assignments (e.g., work items). Furthermore, Spraetz teaches the following limitation:

- *and receiving additional bids after the displaying step* (page 50, 2nd column, 3rd ¶ which teaches that "[f]or operations using schedule bidding, the effects of agent turnover and changes in contact volumes between bid cycles". Spraetz teaches that during a bid cycles additional bids are received);

Philonenko teaches that "[s]tations 147-153 are equipped with agent-operated personal computer/video display units" (page 6, ¶ 0075). The combination of Philonenko and Spraetz does

not expressly teach how bids are displayed to the agents. However, EIX in an analogous art of allocating work items for the purpose of displaying information (Reference B, Figures) as shown does:

- *displaying the selected bid and/or information associated with the selected bid to at least some resources in the set of resources* (Reference B, Figures, which they display information to agents and page 2, StatsViewer which teaches that "[w]ith StatsViewer, data is available by Skill (S) or Queue (Q) for the agent, supervisory group and management unit");

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination of Philonenko and Spraetz (System and Method) by displaying information associated with the selected bid (e.g., queue information) as taught by Reference B because it "gives contact center agents immediate access to information and empowers them to improve their own performance". (Reference B, page 1, last ¶).

As per **claim 41**, this claim encompasses substantially the same scope as claim 15. Accordingly, claim 41 is rejected in substantially the same manner as claim 15, as described above.

16. Claims 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Philonenko (US 2002/0131399 A1) in view of EIX (1998-2002) (http://web.archive.org/web/20020803000353/http://www.iex.com), TotalView™ The Workforce Management Solution, TotalView Product Literature: TotalView's Agent Webstation (1998-2002) hereinafter Reference B.

Claim 21:

Philonenko as shown discloses the following limitation:

- *at least one bid received for the at least one work item* (page 13, ¶ 0157: which teaches that "the 'offer of value' or a bid might be from a communication-center host or entity to a client" where "[t]he offer of value may be given to a client for agreeing to wait longer in a queue instead of being advanced in the queue" in order "to help

load balance busy agents without losing clients due to long waiting periods." Philonenko teaches that a bid have been received in order to service the work item);

- *an identity of at least one work item* (Figure 4, which it illustrates Agent 1-4 and calls waiting queue" (e.g., one work item identified: calls 1 to 7));
- *and for each received bid: an identity of a resource placing the bid* (page 13, ¶ 0157: which teaches that "the 'offer of value' or a bid might be from a communication-center host" (e.g., an identity of a resource placing the bid) "or entity to a client");
- *and at least one of a value of the resource and a value of the work item* (Figure 4, which it illustrates a value of the resource (e.g., Agent 1: Busy) and a value of the work item (e.g., call 1: priority 7));

Philonenko does not expressly teach a table maintained in an electronic memory of a contact center. However, Reference B in an analogous art of allocating work items for the purpose of maintaining a table in a contact center (Reference B, Figures) as shown does:

- *A table maintained in an electronic memory of a contact center, comprising* (Reference B, Figures, which they illustrates tables in an electronic format of a contact center displaying information to agents)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination of Philonenko and Spraetz (System and Method) by displaying information associated with the selected bid (e.g., queue information) as taught by Reference B because it "gives contact center agents immediate access to information and empowers them to improve their own performance". (Reference B, page 1, last ¶).

Claim 22:

Philonenko as shown discloses the following limitation:

- *further comprising: a composite value based on the at least one bid and the at least one of a resource value and work item value* (page 2, ¶ 0025: which teaches that "(a) interacting with the author of each event" (e.g., a plurality of work item value) "to establish a value contribution promise or not;" (e.g., a bid) "(b) upon receiving a promise of a value contribution, transacting the value contribution on behalf of the author; and (c) advancing the queue position" (e.g., a resource value) "of the message of the author according to the rules of transaction" (e.g., comparing the determined composite values to select a resource to service the work item));

Claim 23:

Philonenko as shown discloses the following limitation:

- *wherein the at least one of a resource value and work item value comprises both the resource value and the work item value* (Figure 3, with it illustrates a resource value (e.g., Agent 1 is in training, Agent 2 is available) and work item value (e.g., service call 1 with priority 10, call 2, with priority 2);

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- O' Brien (US 6,587,831 B1) disclose a system and method for online scheduling and shift management.
- Shaffer et al (US 6,058,179) disclose one number, intelligent call processing system.
- Shaffer et al (US 5,901,214) disclose one number, intelligent call processing system.
- Borissov et al (US 2002/0029213 A1) discloses a method and system for resource allocation.

- Business Editors, **Microdyne Outsourcing Rolls Out RightForce Workforce Management to Manage Bi-Coastal Contact Center and E-Services Staff** *Business Wire*. New York: Dec 4, 2001. pg. 1 which discloses an application that allows employee to view and bid for schedules.

- Business Editors, High Tech Editors. **IEX Enhances Award-Winning Workforce Management Solution** *Business Wire*. New York: Jul 31, 2001. pg. 1 which discloses that for multimedia contact centers, TotalView Workforce Management lets managers plan and optimize resources across all channels of customer contact.

Any inquiry of a general nature or relating to the status of this application or concerning this communication or earlier communications from the Examiner should be directed to **Nadja Chong** whose telephone number is **571.270.3939.** The Examiner can normally be reached on Monday-Friday, 9:30am-5:00pm. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, **BETH BOSWELL** can be reached at **571.272.6737**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://portal.uspto.gov/external/portal/pair <http://pair-direct.uspto.gov >. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at **866.217.9197** (toll-free).

Any response to this action should be mailed to:

Commissioner of Patents

P.O. Box 1450

Alexandria, VA 22313-1450

or faxed to **571-273-8300**.

Hand delivered responses should be brought to the **United States Patent and Trademark Office Customer Service Window**:

Randolph Building

401 Dulany Street

Alexandria, VA 22314.

/Nadja Chong/ Examiner, Art Unit 3623

/Scott L Jarrett/

Primary Examiner, Art Unit 3623